5

of internal stresses in the crescent shaped disc, instead of simple bending in pivotal links. Additionally, it is important to realized that the invention provides full movement in the plane of articulation if desired. As shown in FIG. 4 the end piece 3 can be moved all the 5 way so that it is adjacent to the base member 1, and application of the invention to a joint of the wearer restricts lateral movement, but not necessarily movement in the plane of articulation.

FIGS. 8, 9, 10, and 11 shows the application of the 10 invention to various parts of the human body, namely the ankle, wrist, knee, and thorax respectively. Application to the hips could be accomplished by attaching to the waist and thighs of the wearer. FIG. 9 shows a cuff type on a wrist, with a palm rest 28 shaped to conveniently fit the palm. FIG. 11 shows a vest 29 type on the thorax with pocket inserts 30 down the spine and under each arm. On the thorax, a single pocket insert of the invention in the vest down the spine would restrict back bending frontward and rearward but allow side to side 20 movement. By placing the invention in a pocket insert under each arm, side to side movement is restricted.

I claim:

1. A protective orthopedic prosthetic device comprises:

a means for attaching the device to the limb or body of the wearer,

a base member being generally flat having an attaching end which attaches or is inserted into the means for attaching the device to the body of the wearer, 30 and the base member having a convex semi-circular end whose edge has a T-shaped groove,

a plurality identical of crescent shaped discs having a convex edge whose cross-section is a T-shaped groove identical to the T-shaped groove of the base 35 member, and each crescent shaped disc having a concave edge whose cross section is a T-shaped tongue which is sized to slideably fit the T-shaped groove of the base member and other crescent shaped discs; the concave edge and the convex 40 edge of the crescent shaped discs being circular arcs whose radii are both approximately equal to the radius of the semi-circular end of the base member;

and an end piece being generally flat having an attaching end which attaches or is inserted into the means for attaching the device to the limb or body of the wearer, and having a concave semi-circular end whose cross section is a T-shaped tongue which is sized to slideably mate and fit the T-shaped groove in the crescent shaped disc and the T-shaped groove in the base member, the radius of

the concave semi-circular end of the end piece being approximately equal to the radius of the semi-circular end of the base member,

and a plurality of stop blocks, being two for each T-shaped groove, each step-block having a threaded tap at its approximate center said threaded tap passing clear through the stop-block, the stop-block being sized to loosely slideably fit the T-shaped groove in the base member and crescent shaped discs,

and a plurality of threaded set screws to screw into and through the threaded taps,

and an optional means for aiding joint dysfunction.

2. The device of claim 1 wherein the means for attaching the device to the limb of wearer comprises:

a hollow in the base member or end piece or both a slot in the hollow

a cup, having an attaching bar

a cup slot

and a threaded flat heat nut and a matching threaded flat head screw sized to slideably fit through the cup slot and slot in the hollow, assembled so as to provide a ball joint type mechanism and a friction locking means.

3. The device of claim 1 wherein the means for aiding joint dysfunction comprises:

a recess in the base member having a spring attachment

a coil spring attached on one end to the spring attachment.

a wire attached to the other end of the coil spring

a plurality of openings in the base member, of the plurality of crescent shaped discs, and the end piece,

a plurality of pins in each opening to guide the wire, and a wire attachment in the end piece, to which the wire, after being threaded through the openings, is attached.

4. The device of claim 1 wherein the means for aiding joint dysfunction comprises:

two channels formed on the edges of the invention by forming the edges of the base member, end piece and each liner,

four spring fasteners, one on each edge of the base member, and one on each edge of the end piece;

a spring which is attached at one end to the fastener on one edge of the base member, and at the other end to the fastner on the corresponding edge of the end piece; said springs being in tension when so attached; and laying in the aforesaid channels.